



Ingersoll-Rand's- Advanced Microturbine Program



- DOE Funding: \$1.4 M over 4 years
- Partners: Kyocera, Honeywell Ceramic Components, ORNL, NASA
- Approach: Apply today's Si_3N_4 turbine technology to PowerWorks™ platform:
 - Power Gen (100 – 250 kW with an electrical efficiency of 40% LHV)
 - High efficiency direct-drive air compressor
 - Advanced high efficiency chiller and refrigeration packages



Ingersoll-Rand's- Advanced Microturbine Program



- Applying today's Si_3N_4 technology to microturbines will achieve near-term product success:

- PowerWorks™ air compressors use turbine rotors comparable in size (<3 in dia.) and geometry to Si_3N_4 turbochargers that have been produced in high-volume.

- These small turbocharger rotors are low in cost, and operate at temperatures above that of uncooled metallic candidates.

